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ABSTRACT

A learning team comprises two or more teachers of any two or more subject areas who work to create a small, cohesive learning community. Interdisciplinary learning teams are vehicles that can empower school community members. This first part of this handbook introduces the learning team concept, discusses issues to consider in implementing learning teams, and offers 15 reasons for high schools to develop learning teams and 5 reasons why schools resist. The second part offers suggestions for getting started--identifying purposes, creating pilot programs, selecting students and recruiting teachers for the team, scheduling learning teams, changing the curriculum, beginning the year right, and sustaining the effort. One figure is included. (Contains 24 references.) (LH)

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Interdisciplinary Teams for High Schools

Frank Tipton

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Interdisciplinary Teams for High Schools

by
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Introduction

In my first two years of teaching, when I was a social studies teacher in a large, diverse, urban high school in Illinois, I felt inadequate in dealing with the variety of challenges my students brought to the classroom. I felt overwhelmed by the number of students I saw each day and by my own desire to get to know each of them and their parents. But I also felt powerless, because my classroom door revolved every 50 minutes. The students seemed to be constantly coming and going, offering me little opportunity to really get to know them.

My ideals crashed head-on with the realities of teaching in a flawed system. As hard as I tried to make my world civilizations class relevant and meaningful to my ninth-grade students, I knew that my class was an experience at odds with their experiences in other classes. They saw no connections between the various classes they attended throughout the day and the information they learned there. In the words of James Beane, my students' lives were "deadened by the litany of disconnected facts and skills they faced every day" (1995, p. 2). And, sadly, I could not even help them make connections, because I had no way of knowing what was being taught on a daily basis in the other classrooms.

Furthermore, as a professional, except for contacts with a few members of my department and other close friends, I felt disconnected from most of my colleagues in the building, especially those in other departments. Staff meetings never provided opportunities for dialogue about the curriculum. And there was little time to reflect, share, or plan collaboratively with members of my own department on a regular basis, much less with colleagues in other departments.

Many of my colleagues, both rookies and veterans alike, struggled in their own ways with a flawed system. The effect was that each of their classrooms became a "castle," an artificial world in which they felt they had some control over the environment and what happened in it.

I began to question the structure of our school day with some of my concerned and visionary colleagues. Our questioning led to problem solving, and we proposed piloting what we called a "learning team" for freshmen entering our new, combined high school of 3,000 students. We did not do a lot of research on how to "team" or on the benefits of collaboration, and we did not know of any high schools in our area that were teaming. We just knew that our proposal was a commonsense solution to a common problem. And so, after struggling with an administration that feared scheduling difficulties (which did not materialize), our proposal to pilot one team was accepted; and we received support to be trained with the district's middle school pilot teams that summer.

The next fall, our high school pilot learning team comprised approximately 90 average and low-ability students selected at random from the required courses in which they were enrolled: algebra or pre-algebra, biology, English, and world history.

At the end of the school year, my colleagues and I — along with our students — could look back on a very positive experience. And by the end of two years, the number of interdisciplinary teams had increased to 14, including 60 volunteer teachers and 1,500 students in grades 9 through 11. Teachers and students got to know each other better. Discipline problems, truancy, and failures decreased. Caring communities of adult and adolescent learners were created that improved morale and performance for students and teachers alike (Spies 1994).

A couple of years later, I experienced teaching on a learning team of a much different kind at a wealthy suburban high school. I teamed with an English teacher and 30 English-as-a-second-language (ESL) students. Our American studies learning team was another common-sense solution to the needs of our students for a content-rich and coherent curriculum within a nurturing academic community. As had been the case in my previous school, our learning team became a kind of family, an international one in this case, in which students and teachers experienced accelerated skill and knowledge acquisition.

In the third and smallest high school of my teaching career (only 750 students in grades 9-12), my experiences and feelings resembled my first two years of

teaching in the large urban high school more than I could have anticipated. I was hired partly because of my interdisciplinary team teaching experience, but there was no team for me to teach on. And so, despite the fact that the school was one-fourth the size of my first school and was considered one of the better schools in the Milwaukee area, I felt isolated and frustrated as a teacher without a team of colleagues who shared the same students.

Once again, day in and day out, five periods a day, students entered and exited my room without my knowing where they came from or where they were going for their next educational experience. The hustle and bustle of my school day — and the current days of thousands of other high school educators — was dictated by students shuffling around the school every 50 minutes. I once again found myself at counselor-led student intervention conferences with close colleagues who had the same troubled students without any of us knowing it.

Once again, I had students complaining about too much work because of assignments due in different classes at the same time. Once again, I found that my students were disengaged from learning that they did not see as connected in any way from class to class. And once again, my perspective of students tended to become subject-centered and myopic.

Although there was one successful English-global studies team and one failed attempt at teaming math, science, and technology at this school, an opportunity for me to become part of a team never materialized.

Knowing how interdisciplinary teaming can enhance teaching and learning but having to "sit on the sideline" was a key reason for my difficult decision to leave the classroom and pursue my doctorate in curriculum and instruction.

After six years of involvement as a team teacher, team leader, team coordinator, and team observer, after networking and consulting with hundreds of other high school educators around the country, and after learning about how interdisciplinary teams have led the middle school reform movement for three decades, I know that interdisciplinary learning teams also must be a central component of any meaningful high school reform effort.

Through observation, experience, and research, I have come to view interdisciplinary learning teams as vehicles that can empower students, parents, counselors, teachers, and the curriculum to succeed in reaching their goals. Finally, it is comforting and personally empowering to learn that there really is nothing new in this "reform" idea, which has been discussed in the education literature over many years (Hopkins 1941; Aikin 1942; Alberty 1947; Lurry and Alberty 1957; Erb and Doda 1989; Jacobs 1989; Merenbloom 1991; Sizer 1984; Vars 1991, 1993).

In culling ideas for this fastback, I am indebted to many colleagues and students with whom I have learned during the team process. My mentors come from the middle school reform movement, and I often feel as though it is the high school educator's job to continue the momentum of reform that middle-level schools have brought to secondary education. The ideas

and suggestions in this fastback were tested in the front lines of teaching and learning, and they are supported by sound education theory and research. It is my hope that those who read this fastback will be moved to seek similar opportunities for collaboration in their own high schools.

The Learning Team Concept

A *learning team* is simply two or more teachers of any two or more subjects who have in common the same students, class periods, planning time during the school day, team development training, and commitment to working with the group of students they share. The word *learning* is tied to the word *team* because it expresses a value. The term *learning team* is more descriptive and less like education jargon to parents and the community compared to more commonly used terms, such as simply *team*, *house*, *cluster*, *pod*, or *family*.

The primary purpose of any learning team is to create a small, cohesive learning community in which students and teachers make interpersonal and interdisciplinary connections that do not normally occur under traditional scheduling arrangements. Ideally, teachers and students create a model of integrative learning by examining various perspectives of the same important topic, issue, or concept, based on student and societal concerns (Beane 1993). The artificial confines of 50-minute periods typically are replaced with back-to-back

class periods that create blocks of time for learning teams to engage in exploration and deep understanding — without worrying about when the bell is going to ring.

It is important to distinguish between the traditional idea of "team teaching" and the broader concept of learning teams. Many veteran teachers remember the days when two teachers in the same subject or different subjects would have a large classroom with 30 to 65 students for two consecutive periods. Sometimes these teachers would "turn teach" or engage in dynamic "co-teaching." Having two or more teachers in the same room with students on a daily basis is just one model of what a "learning team" could be.

Learning teams can be constituted in other ways, and connecting the curriculum and working on interdisciplinary learning does not mean that teachers must give up their individuality or sacrifice course content. A much different model for a learning team could be five teachers who teach their own classes in their own rooms but meet periodically during their common planning time to discuss their common students. At these team meetings, they coordinate a team homework and test calendar, and they share lesson plans with the idea of making connections between their subjects. Team teachers also coordinate team projects, field trips, and guest speakers, occasions that bring all of the team's students together.

Many teachers are not comfortable with, or trained in, traditional team teaching. This type of team teaching requires two professionals who get along very well

on a personal and professional level and who are comfortable having their colleague by their side through the whole process of planning, teaching, and grading. These teachers must have flexible teaching styles and an equally flexible view of their subject's curriculum. And their students must be able to focus on learning for a longer period of time in a large classroom with twice as many classmates as usual.

Learning teams allow the diverse teaching styles, skills, and personalities of teachers to complement each other. They also help teachers more adequately address the diverse needs and personalities of the students they share. Teachers working together often can address students' needs more efficiently and avoid duplication of effort.

A learning team can be compared to an orchestra. An orchestra is made up of talented musicians, many of whom could entertain as soloists; but their music gains greater meaning when they practice and perform together.

Questions to Consider

The Gestalt concept of "the whole being more than the sum of its parts" is one that can be used in selling the idea of learning teams to hesitant colleagues. But here is another notion to consider as well.

In order for American manufacturing to survive in the post-Industrial Revolution economy, industries have had to change their methods of production. The division-of-labor, assembly-line approach to production has given way in modern industry to the collaborative

team approach to problem solving and to continuous quality improvement. Yet the vast majority of today's high schools operate as outdated, impersonal, factory models. Each teacher is an isolated entrepreneur, cut off from critical information about his clients and other entrepreneurs.

However, high schools can rather easily and inexpensively transform themselves into learning environments that better meet the needs of students and teachers. Some people view change as a threat; others view change as an opportunity. The key to overcoming resistance to change is asking the right questions. Change leaders might ask, for example:

- What are the most important problems in our school that inhibit effective and affective teaching and learning?
- What would happen if most of the teachers in our building shared the same students with at least one other colleague? What would likely happen to teacher-student, teacher-parent, teacher-teacher, and student-student relationships?
- What if these "team teachers" also had the time during the contractual school day to meet with each other? What would likely happen to the curriculum?
- What would happen to instruction and learning in these smaller learning communities if learning was not necessarily directed by bells?
- How could these structural changes, curricular connections, and new relationships affect our graduates and, consequently, our local, national, and global communities?

Many teachers enter the profession to make a difference, but they become shackled by outdated school systems as they try to realize their ideals. Brainstorming answers to these questions with small groups of colleagues will get most high school teachers to sit up and take notice, because they will sense a new opportunity to make a difference.

This suggested brainstorming activity, first, will help teachers identify what is keeping them from realizing their goals. Next, they can envision how teaming might overcome feelings of isolation and might foster collegiality. Then, if teachers are empowered to make change happen, the teaming concept can be translated into positive changes in curriculum and instruction. Ultimately, the effect will be positive not merely for the teachers themselves but, more important, for students. Team teaching provides opportunities for better meeting the affective needs of students, as well as helping them achieve significant academic goals.

Fifteen Reasons Why High Schools Should Develop Learning Teams

Following are 15 good reasons for high schools to develop learning teams.

1. Learning teams encourage a focus on student-centered actions and attitudes in schools.

Without knowing what a student experiences throughout the school day, a teacher naturally tends to view the student solely in terms of behavior and performance in his or her own classroom. When team teachers listen to

each other talk about a student that they share, their perspectives become multidimensional, and they become more concerned for the total well-being of their students. The language of team teachers switches from "my student" to "our student." And the thinking of team teachers also switches from "What do I teach?" to "What's best for our students to learn?" Teachers on learning teams often become less subject-centered and more student-centered.

Team teachers often become special advocates for their students, concerned not only about their performance in team classes but also in non-team classes and outside the school. Team teachers are more apt to recognize and reward all students for instances of positive performance and behavior, not just the few students who stand out. For example, team teachers collectively can design student awards to recognize and celebrate positive behavior, attendance, and achievement.

2. *Learning teams can provide a safety net for students who otherwise might go unnoticed and "fall through the cracks."*

This is especially true for freshmen. The way most high schools currently are structured, "average" students go unnoticed and risk not having their educational, social, or emotional needs met simply because they do not stand out from the crowd. Thus it is not until they run into real problems that anyone notices — and by then it may be too late.

Learning teams, because they encourage shared, multiple views of each student, can help ensure that the "average" student does not fall through the cracks in the system. For high school freshmen, who are new to

the large size and seeming impersonality of high school, being part of a learning team can be a crucial part of adjusting to and thriving in the new environment.

3. Teams can help improve students' attendance, behavior, and attitudes toward school.

Students in learning teams quickly realize that their teachers, collectively, care about their success, and so they tend to view their teachers as more than just authority figures who give them work to do. Sharing the same courses and teachers (not necessarily the same class periods) with other students also can be a source for feelings of belonging and friendship, countering the alienation that is common in a large school. This sense of community and belonging can deter otherwise alienated students from joining dysfunctional groups, such as gangs.

When students feel as though they belong, they also feel needed and wanted and are more likely to attend class. When they are recognized for their positive qualities by a group of teachers who care about their success, they are more apt to want to continue that positive recognition. Following are what some learning team students have said:

> "Learning teams are fun because you get to meet more people, and you know your teachers better."
>
> "I know my teachers care what I do and how I do it on a team."

Discipline problems can be reduced using learning teams because teams can develop consistent expectations for student behavior that extend beyond the single

class and the single teacher. Similarly, a team's enhanced ability to communicate allows teachers to present a united front in dealing with students who might try to skip a class, act a certain way with one teacher but not others, and otherwise attempt to manipulate their teachers and counselors. In fact, team teachers and administrators often mention a sharp reduction in discipline referrals as a positive effect of learning teams.

4. Teams can help improve students' skills and achievement.

Students have commented, "Having teachers work together helps me understand things more clearly" and "A learning team can make everything relate to every other thing." Team teachers often find that students are able to improve certain skills through a team emphasis and reinforcement of those skills. Note-taking, research, problem solving, hypothesizing, speaking, listening, and writing are examples of lifelong learning skills in which team teachers can help students become more proficient by working on such skills cooperatively.

Students also benefit from a coordinated calendar of homework and tests. And teachers all can work toward common high expectations with the full knowledge of what each of their colleagues expects of the students they share.

Achievement also increases when teachers agree to identify students who are having difficulty, to work cooperatively to help troubled students, and to share grades and progress reports regularly. By working cooperatively, teachers can ensure that students who are experiencing difficulty at school not only get increased

teacher attention but also gain support from counselor and parent interventions. Learning teams can create peer tutoring opportunities that benefit both bright and challenged students. Some teams also set up a "homework hotline" with nightly homework updates recorded on an answering machine at school.

An ideal arrangement for students who are assigned to study halls and team teachers who are assigned a supervisory duty is the creation of a learning team tutorial period. Instead of study hall being a potential waste of time and a source of behavioral problems, students and teachers can have a real opportunity for remedial or enrichment work.

5. Learning teams allow teachers with diverse instructional styles to work cooperatively in meeting the diverse learning styles of shared students.

Connecting teachers and curriculum by means of an interdisciplinary learning team does not mean that individual teacher identity or course content has to be sacrificed. Learning teams allow for diverse teaching styles, skills, and personalities precisely because such diversity can better address the diverse needs and personalities of students.

An instructional strategy that may be one teacher's strength may be another teacher's weakness, and so the team approach can help teachers build on each other's talents. Recognition of diverse learning styles means that planning effective instructional activities has become increasingly difficult and complex. Therefore, collaborative team planning can make the overwhelming

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task of addressing all students' needs more manageable and effective.

6. Learning teams are "friendly" toward involvement by parents, counselors, deans, resource teachers, and others who can support instruction and meet students' affective needs.

One of the biggest problems for teachers and counselors is the lack of time they have to give attention to each student, considering the large number of students they try to serve. Instead of all teachers calling home about a failing or disruptive student, the team teachers can share the responsibility and delegate one individual to make calls or counselor contacts on behalf of the team. In this way, learning teams again bring efficiency to the school setting by avoiding duplication of efforts.

Effective learning teams take advantage of their "strength of numbers" by setting a goal of contacting every parent in a proactive way within the first few weeks of school. Teachers call on behalf of the team to welcome the parent's involvement in their child's education. When teachers divide the responsibility to call every parent, it helps establish a positive relationship that may make that first call home for negative reasons a little easier.

Learning teams also ease the burden on parents, counselors, psychologists, deans, class sponsors, special educators, and bilingual resource teachers because these people now can have access to all of a student's team teachers at a single time and place. If a conference is needed with a student and his or her teachers, it can be scheduled during the common planning time that

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the team teachers share. Whenever resource personnel in school need more information about a student, they can ask the whole team to respond and will receive a quicker response without having to "track down" a number of different people or having to set up separate appointments. The result of this efficiency is that support personnel — and parents — can more readily gain a holistic and accurate view of the students.

7. Learning teams relieve teacher and departmental isolation.

Many teachers ask their students to work together, but many students rarely see their teachers work together. Schools and teachers need to model collaboration if they expect students to learn to work cooperatively.

Interdisciplinary learning teams offer teachers both means and motivation to collaborate and to create self-renewing learning communities beyond their isolated classrooms or departments. Learning teams can enhance staff unity, because teachers begin to associate and identify with colleagues outside their own discipline or department.

8. Teams empower teachers through the sharing of ideas, methods, and responsibilities.

When teachers share the same students and have time to discuss their students and their curricula, a new professional atmosphere can be created in a school. Teachers' efficacy is enhanced on learning teams because they share their frustrations, successes, and creative ideas. Teams of teachers feel empowered to deal with students who require extra attention, and they can develop joint

strategies for helping such students. For example, if a schedule adjustment will make a difference, then within the team the teachers are empowered to make that adjustment.

Sharing best practice, formally and informally, also is a great benefit of teaming. For example, one teacher on a team may be a great facilitator of cooperative learning activities. He or she can share strategies with team colleagues. A teacher who is a detailed planner and organizer can provide less-organized colleagues on a team with examples of how to deal with overwhelming paperwork. A team teacher who is interested in developing more authentic means of assessment centered on multiple intelligences can solicit advice and examples from team colleagues. Having a group of colleagues who will listen and offer support during the inevitable frustrating times of teaching can help both rookie and veteran teachers from becoming burned out.

9. Learning teams are true site-based management.

Interdisciplinary learning teams can be viewed as site-based management in its truest form, because learning teams truly empower those most intimately involved in decisions about teaching and learning.

For example, if teachers on a learning team have some or all of their class periods back-to-back with a common group of students, they can make informed scheduling decisions based on the academic and social needs of those students. They can control how and when the established curriculum is covered in order to make it relevant and connected to other subjects.

10. Teams encourage coherent and connected curricula.

James Beane compares the incoherence in the typical high school curriculum to giving students jigsaw puzzle pieces without giving them a picture of what the pieces are supposed to create when put together. Beane defines a coherent curriculum as:

> one that holds together, that makes sense as a whole; and its parts, whatever they are, are unified and connected by that sense of whole. . . . A coherent curriculum has a sense of the forest as well as the trees, a sense of unity and connectedness, of relevance and pertinence. (1995, pp. 2-4)

According to Beane, when a curriculum is coherent, "young people are more likely to integrate educational experiences into their schemes of meaning, which in turn broadens and deepens their understanding of themselves and the world."

The typical high school curriculum tends to be repetitious, incoherent, irrelevant, and even contradictory. Too often, teachers teach about the same concepts or skills in different situations, often without realizing that they are doing so. For example, literature, foreign language, and art teachers often find themselves having to teach about history or culture. Learning teams can help eliminate this redundancy by coordinating the curriculum and by allowing the subject specialists to connect their expertise with the expertise of their colleagues.

11. Teams encourage higher-order thinking skills when students are expected to make connections among different subjects.

This point is closely related to the previous one. Anyone who is aware of the growing research on how the brain functions in learning knows that the brain is a pattern-seeking, connection-making organ. Unfortunately, by teaching in isolated classrooms, the typical high school curriculum and schedule rarely encourage students or their teachers to make connections between knowledge gained in one discipline and knowledge gained in any other discipline. By facilitating the connecting of disciplines and the elimination of curricular redundancies, learning teams help students to see the connections between subjects and thus facilitate critical thinking.

12. Learning teams can create more exciting and engaging learning experiences in and out of school without having to worry about when the bell is going to ring.

If teachers on a learning team are given a block of time, they can create special learning opportunities that are more difficult to schedule in traditional arrangements. For example, science, math, and physical education teachers can have more time to complete a lab or match if they do not have to worry about losing their students to the bell. Social studies, health, technology, and business teachers can bring in more guest speakers with adequate time for them to answer students' questions. English, foreign language, and fine arts teachers can take students on field trips to plays, concerts, or museums without disrupting the rest of the school.

High school learning teams can engage in community service projects, library orientations, or integrated thematic units much more easily when such activities

are not dictated by the bell. And developing school-business partnerships also is easier within the learning team structure. Students and teachers can visit a local industry, or representatives from a hometown business can work with team teachers in developing units in which students find obvious applications to what they learn in the classroom.

13. Learning teams are cost-effective reform tools.

Learning teams are probably the most secure investment that a school district can make in human resources. Learning teams directly affect teaching and learning on a daily basis, yet most learning teams need not cost any extra money outside of normal staff development funds for training and curriculum development. They require merely that schools rearrange existing human resources. In other words, *will*, not *wealth*, is the key.

In addition, many learning team students and teachers will choose to conduct their own fund-raisers for special team activities. Teams also can develop innovative programs that attract donations or grants from corporations that are encouraged by the reforms and results they see.

In schools with high truancy and failure rates, learning teams can help save thousands of dollars by reducing the number of students needing to repeat courses and by improving the average daily attendance figures, which determine school funding in many districts. Finally, because learning teams often provide more than their share of positive public relations for a school, boards of education may find it easier to pass referenda on tax increases.

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14. A growing research base supports the benefits of learning teams for students and teachers.

At least three recent national studies, cumulatively involving thousands of high schools, have concluded that school restructuring can lead to increased student achievement (Cawelti 1995; Lee, Smith, and Croninger 1995; Newmann and Wehlage 1995). In each of these studies, interdisciplinary team teaching and integrated curricula are cited as components of school restructuring.

Moreover, these recent studies are predated more than fifty years by the Eight-Year Study, which found that students who attended innovative schools performed as well as or better in college than their peers from traditionally structured schools (Aikin 1942). An abundance of studies over the years have demonstrated the effectiveness of interdisciplinary teams and curricula in middle-level schools, and high school educators can learn much from these (George and Shewey 1994). There is no reason that such successes cannot be replicated at the high school level.

15. Learning teams can be a catalyst for continued and systemic school reform.

When team teachers meet regularly to share teaching strategies and engage in cooperative problem solving, they begin to see more opportunities for total school reform. The energy, commitment, and ideas that flow from team teachers who feel that they are making a difference often can be contagious with their other colleagues in the school. As Garmston and Wellman observe, we live in "a world governed by relationships. Increasingly, self-

renewing schools are collaborative places where adults care about one another, share common goals and values, and have the skills and knowledge to plan together, solve problems together, and fight passionately but gracefully for ideas to improve instruction. This is not a fad that will pass this way and quickly be gone" (1995, p. 12).

Five Reasons Why High Schools Resist Teaming

Franklin D. Roosevelt's famous words are worth remembering: "The only thing to fear is fear itself." Fear of change, however seemingly unfounded or irrational, is real. Unaddressed, the fear of change can sabotage innovation. Following are five "fears" that can lead to resistance to change and so must be addressed by change agents.

Anticipated scheduling conflicts. Scheduling conflicts can arise, particularly in small schools and in schools that allow students to take a wide variety of classes within given subject areas. Teachers of elective classes often feel most threatened. However, many scheduling "conflicts" have a basis simply in the loss of some scheduling flexibility. Scheduling is a process of juggling priorities, and the benefits of teaming can outweigh other demands (such as greater flexibility) on the master schedule. With careful planning, there usually is little or no reason why elective subjects should be threatened by learning teams in the core classes.

Potential personality conflicts. Many teachers believe that they have to be friends to team teach. Some teachers resist teaming because they fear having differences

of opinion with colleagues with whom they will have to work closely. They ask, "What if we don't get along?" As is the case with most relationships, learning teams can become stronger by dealing with conflicting philosophies and beliefs. Furthermore, staff development for potential team teachers should emphasize that the purpose of teaming is for teachers to cooperate as professionals for the sake of students, and that it is acceptable to disagree on some matters.

Lack of self-confidence. Because teachers usually are isolated from other adults for most of their school day, many teachers are insecure about having their work viewed by their colleagues. They may be asking themselves, "What will my peers think of me as a teacher?" Again, in team development training, teachers come to understand that the students are not the only learners. Teachers, too, possess strengths and need to address weaknesses. The learning team benefits from their strengths; it supports them as they correct their weaknesses.

Loss of control. Many teachers worry that the hard, entrepreneurial work they have invested in developing their special classes may be watered down or compromised, rather than enhanced, by connecting with other teachers and disciplines. They view interdisciplinary curriculum from the sideline and ask, "Will my subject lose its importance?" In fact, every subject gains importance because each is connected to other subjects. Such connections enlarge, rather than diminish.

Change for its own sake. Some teachers and administrators do not see an urgent need to change because they think they already are doing a good job with students

through traditional schedules and curricula. Indeed, they may have reason to fear that teaming will be just another fad that comes and goes, and in so doing may upset the good they already have achieved. Unfortunately, these educators often are ignoring the changes happening all around them, changes that in themselves already pose a threat to the status quo. Purposeful change, such as the adoption of learning teams, is proactive. Such change seizes the opportunity to grow — before change becomes a painful necessity.

Getting Started

It would be easy to fall back on the Nike slogan, "Just Do It!" Although change is never quite that easy, the slogan is good advice. Too much analysis of reform can lead to paralysis of reform. Once the decision has been made to move toward learning teams, the focus of change agents must be on learning about effective teaming and curriculum integration, not rethinking and researching the decision to team. That latter road is too often taken and is wholly unproductive.

Identifying Purposes

Identifying the purposes for developing learning teams will determine the nature of the program and is a crucial first step in the implementation process. Based on a needs assessment that includes the perspectives of all members in the school community, change leaders should develop both short-term and long-term goals. The questions listed previously provide a good starting point toward developing purpose and rationale statements for each type of change, such as schedules, class groupings, and teacher team configurations.

Following are potential goals that may be useful for planning. The goals are not in any particular order, nor are they "either/or" propositions. Planners should understand that teams need years to develop fully and that all goals cannot be accomplished in the first year. But identifying goals emphasizes that teaming is a means to various ends, not an end in itself. Some potential goals for teaming are:

- To improve student attendance.
- To reduce behavior problems.
- To increase students' sense of belonging and ensure that each student is recognized as a unique individual by at least one adult who knows him or her well.
- To improve skill development across the curriculum.
- To reduce student failures by regularly sharing information and by developing collaborative support strategies.
- To increase communication between different departments.
- To better provide training for college, preparation for a vocation, or a smooth transition from middle school to high school.
- To mentor new teachers and to give collegial support to weak teachers.
- To develop an integrated curriculum for higher-order thinking.
- To provide a coherent and more relevant curriculum through the integration of subject matter.
- To facilitate heterogeneous student grouping.

- To provide special attention to a specific student population, such as honors, at-risk, bilingual, or special needs students.
- To devise alternative, authentic forms of student and teacher assessment.
- To empower teachers for site-based and classroom-based decision making.

It is very important for representatives from the entire school community to be included in identifying the purposes and priorities for implementing learning teams in your school. It also is crucial for this representative group to make sure that the concept and its purposes of learning teams are understood clearly by other teachers, administrators, counselors, and parents. A proactive approach to public relations is essential for any new program in order to avoid unexpected attacks from critics who have inaccurate information about the reform effort.

Pros and Cons of Piloting

A major question that will need to be answered is whether to start with a pilot learning team or with full implementation of learning teams in all target areas. While I tend to favor plunging ahead, there are good reasons for and against starting with a pilot learning team. Following are some of the "pros":

- A pilot gives interested people a chance to "work out the bugs" in their own school setting, instead of spending time doing research about how other

teams and schools experience the collaboration process in different environments.

- A pilot allows a research and development committee of faculty, students, and administration to formally assess the effect of the team's efforts compared to a control group of teachers and students who are not teamed.
- A pilot allows for informal assessment and learning about the program to occur in everyday conversations among staff and students. An excited group of teachers, students, and parents can do more to "sell" the team approach to resisting peers than any amount of research from other schools.
- A pilot allows the pilot team members to become credible in-house facilitators of team development training for future teams.

Now, here are some of the "cons":

- A pilot can become the extent of the whole program if school planners are not careful to gain support and understanding from the whole school community. The pilot should be viewed as a step toward wider implementation. If there is no consensus about the role of teaming in the vision of the school, then the pilot probably will not lead to systemic reform.
- The pilot team may face undo pressure to succeed or excel if too much emphasis is placed on the team's outcomes after only a short time. When learning teams are viewed as a panacea, this unrealistic expectation can lead to disaster and disappointment.

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- Selection of the pilot team teachers may be difficult because the team may be viewed as a "stacked deck" containing only a certain "type" of teacher. This view can discourage other staff members from seeing themselves as team members in the future.
- If the pilot team is given more support than future teams can reasonably expect, then team members will face disillusionment in the long run. Care must be taken to structure the pilot in a manner that can be replicated, in terms of number and type of students, class locations, team planning periods and meeting space, special budget, and so on.

Selecting Students for the Team

Perhaps the best way to select students for a learning team is to take a random, heterogeneous sample of students. Too often learning teams are thought of as only for "special" students — the gifted, disabled, at-risk, limited-English-proficient, and so on. Clearly, this is not the case. So-called average students stand to benefit as much as other students from successful learning teams.

Students seldom benefit as much in homogeneous settings as in heterogeneous ones, whether in learning teams or otherwise. Indeed, the negative effects of tracking have been well documented by Oakes (1985) and Wheelock (1992). Learning teams make detracking efforts and heterogeneous grouping more successful because of the support and collaboration of team teachers in meeting the varied needs of students. Teachers on some learning teams involved in detracking students

have even found that students originally designated as "low ability" performed as well as or better than their average-ability peers.

Some schools compromise on the political "hot potato" of eliminating honors-level courses during the detracking process by incorporating advanced-level sections within learning teams. To illustrate this format, students on a three-subject team would all have the same teachers, but some students might be in an "honors" section for one or two of their classes and in "regular" sections for their other classes. The teachers in the team would teach both honors and regular classes. As very few students take all honors classes, this approach maintains a form of heterogeneous grouping within the team while accommodating the inclusion of advanced classes.

Some schools select learning team students by invitation only, and others let their team teachers market their special courses. One of the problems with "invitation only" learning teams is that the teaming concept may not be replicated with other non-select groups of students and teachers. As for the model of having the students make a choice to register for a learning team experience, some schools find that this boosts their program, particularly if it involves elective subjects. On the other hand, marketing learning teams as a choice for students and parents also can introduce instability in planning and implementing a learning team program from year to year.

It can be argued that learning teams are most beneficial when teaching freshmen. Freshmen students' social

and affective needs increase as they make the transition from a smaller junior high or middle school to a larger high school. Ninth grade is a critical step for the student in taking a path toward earning a diploma or dropping out of school (Lounsbury and Johnston 1985). Some middle-level education reform leaders, such as Conrad Toepfer, express concern about what happens to the early adolescent once he or she leaves the environment of the student-centered middle school. Toepfer is especially concerned about "the need for high schools not to violate the integrity of the developmental readiness students possess when they matriculate in the high school" (Bergmann 1994, p. 28).

Recruiting Teachers for the Team

Positive and professional interpersonal dynamics are necessary for a learning team to succeed. Teachers should share a common commitment to students first and their subject matter second. Anyone forced to be involved with something, especially if it is different or new, will tend to feel resentment and dissension. For this reason, using a "carrot" instead of a "stick" will prove much more effective in finding teachers to staff the learning teams.

Sometimes the best way to start is to structure a team made up of "mavericks" who already have an interest in teaming. These individuals will likely ensure the success of a pilot and, thereby, "sell" the program to skeptical staff members.

While teammates often form lasting friendships, being friends is neither a prerequisite nor a requirement. The best teams employ the diverse talents and strengths

of their members; thus structuring teams on which members have the same teaching styles or philosophies is not always most beneficial. Whoever is in charge of creating learning teams should ask interested teachers in a confidential survey whether they have experience in teaming, whom they believe they could not work with, and whom they believe they might work with well.

If a pilot team has worked well together, it should not be split up the following year to "seed" new learning teams. Superior learning teams sometimes take years to develop, and careful consideration should be made when breaking up well-functioning teams.

Some characteristics of effective team teachers include:

- willingness to work with others,
- flexible and open to change,
- student-focused,
- good listener,
- understands and believes in the team concept,
- can see the "forest" and the "trees," and
- shows interest in other academic subjects.

Scheduling Learning Teams

The first step in scheduling learning teams is to look for combinations of common classes, whether required or elective. After all, teams can be composed of any combination of disciplines. For example, of the students taking sophomore English, how many also take world history or art foundations? This may be the basis for a team.

Teams most often include three or four required classes (usually freshman level) or a combination of American literature and U.S. history. However, numerous combinations are possible, including the following:

- Spanish and art
- Physics and pre-calculus
- Physical education, health, English, biology, and algebra
- Foods, health, and chemistry
- Geography and CAD (computer-aided drafting)
- Applied arts and math
- Photography and English
- Drama and music
- Industrial technology, geometry, and business
- Global studies, art, and world literature

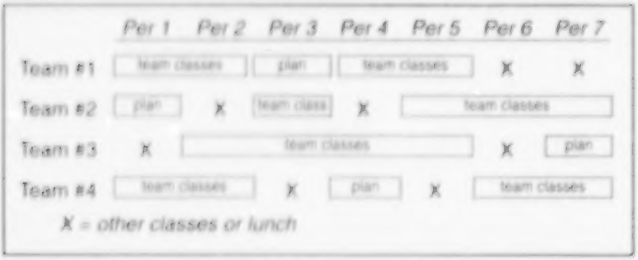
Team scheduling may require reconsidering the variety of courses that are offered. Schools that have few limits on the types of classes they are willing to offer can run into difficulty with team scheduling. But many schools find that this constraint is valuable for reform. While the comprehensive "shopping mall" high school was once the ideal, many schools are finding that they cannot and should not try to be everything to every student (Powell, Farrar, and Cohen 1985).

Creating a master schedule is a complex process, and scheduling students' elective classes in addition to their team classes can be daunting. However, when the elective classes are placed on the master schedule first, there should be adequate time for team classes to be sched-

uled around these electives. The placement of the elective course can result in de facto tracking unless they are offered more than once during the day.

Classes in a four-subject learning team do not have to be scheduled within an uninterrupted block of four periods. There are various ways to schedule a team. However, the schedule should include at least a two-period block of time for a learning team, as well as a common planning time for the teachers. The diagram below shows four ways in which a four-subject learning team can be scheduled within a traditional seven-period day.

Figure 1. Sample of scheduling options for four-subject teams.



Those persons who create the master schedule and work with individual student schedules must support the learning teams if they are to be successful. If these persons do not recognize the importance of creating the structures necessary for learning teams — common students, common planning time, common class periods — they can be careless in maintaining these essential components. Such carelessness can sabotage the program.

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Changing the Curriculum

In 1941, as our country was entering World War II, L. Thomas Hopkins wrote, "The very uncertainties of the future in a world which is changing rapidly demand individuals who can think through unforeseen problems of life rather than those who are capable of amassing credits in fixed subject matter" (p. 51). Today, as we approach a new millennium, our society should expect the same from educated citizens.

Learning teams can begin the process of moving beyond simple credit accumulation in separate subjects by having team teachers share goals, concepts, skills, and themes. This activity can lead many teachers to find natural connections between subjects. Team teachers can go a step further and work to re-sequence existing curricula so as to draw stronger parallels between different classes.

Interdisciplinary units involve the teachers of different classes in examining a topic, issue, or problem from a variety of perspectives. For example, teachers might design a unit on diversity in which an English teacher could use multicultural literature; a history teacher could discuss slavery, immigration, and civil rights; and a science teacher could teach about biodiversity.

Similar is the idea of the *integrated thematic unit*. In this type of unit, teachers and students examine a topic, concept, or problem without necessarily separating learning and assessment activities by subject. For example, students and teachers could be engaged in a unit on AIDS in which they address questions and issues that

transcend separate disciplines to get at fundamental questions, such as: Who gets AIDS? What can be done to prevent AIDS? How fast and where has the HIV virus spread? and How is AIDS similar to and different from other diseases today and the past?

Whether a unit is interdisciplinary or integrated, it is important to use themes that are relevant to students and society. But it is equally important not to force artificial connections between subjects.

Three keys to changing the curriculum are time, flexibility, and resources. Teams need time (during the summer and during the school year) to plan teaching units. If team teachers do not have this time, they usually will be able to make only informal connections between subjects while sharing what they teach from week to week during team meetings. Regarding flexibility, some subject areas and schools can be more flexible in rearranging or designing new curricula than others can, and learning team programs need to be created with this in mind. Finally, team teachers need to have the financial and material resources to develop new curricula if that is one of the primary purposes of the learning team program.

Starting the Year Off Right

Schools that recognize and reward their trail blazers create an ethos where innovations produce results and, moreover, can be replicated.

The best preparation for a new school year is summer time devoted to intensive learning team development.

Following are ten things that learning teams need to do in order to start the year off right:

1. Get to know each other. Team teachers should share their backgrounds, philosophies, and interests in order to develop trust and interpersonal understanding before they begin working together as a team. Some questions that new teams might discuss include: Are good teachers born or made? Who was the most influential teacher in your life and why? What are your hobbies? Where have you lived, gone to school, and worked before now? Where have you traveled? If you could go anywhere, where would it be? Why did you enter the profession? What topic do you like most about your subject area?

2. Agree on common expectations for students. When team teachers discuss common expectations, it is important to strive for consensus; but it also is important to realize that agreeing to disagree is a major step in itself. Learning team teachers should discuss practical issues, such as:

- Supplies that students need and what happens when they forget them,
- When and how often to issue hall passes,
- What to do about students who are tardy or turn in work late,
- How grades are determined and who shares in grading decisions,
- What kinds of field trips would be helpful, and so on.

3. Share individual course goals and develop team goals. This activity will allow team teachers to become more

aware of other subjects and will encourage teachers to examine their own subjects more in depth. When teachers share their individual goals, they often find that they have much in common with one another. Many teams get over-ambitious because of the numerous possibilities that teaming creates, and so a special effort may be needed to keep team goals realistic.

4. Agree to common expectations for team members and identify individual roles for team members. If common expectations are not agreed on, team teachers may inadvertently generate conflicts over misassumptions about such expectations. Teams need to agree about standards for team meetings, such as sticking to the agenda, not grading papers during the meeting, and so on. Team teachers also should decide on roles and responsibilities, such as who will the make the agenda and run the meetings, who will take minutes, who will organize team events, and who will be the chief liaison with administrators, counselors, and parents. Teams can choose to keep the same positions and roles throughout the year or rotate roles so that all members of the team experience different responsibilities.

5. Check class lists. Getting off to a good start means knowing which students to anticipate seeing in the fall. Dealing with schedule changes prior to the school year can make the first week much smoother for teachers and students. Comparing class rosters to make sure that each teacher shares the same students during various class periods also can help teachers become familiar with students' names prior to the start of school.

6. Write a "Welcome Back" letter to students and parents in order to introduce the teachers and the team. This letter

can do a lot to set a positive tone for the school year and gives the team an opportunity to enclose a list of school supplies so that students come prepared to learn the very first day.

7. Divide responsibility for introductory phone calls to parents and for preliminary student advocacy. For instance, the first team class period of the day could become each teacher's group of students for purposes of home contacts, basic advising, and advocacy when problems arise.

8. Decide what will happen the first week to set a positive tone and to develop learning team unity. Just as it is important to set a positive tone and make a good first impression in individual classrooms, it is important to decide how the team wants to introduce students to the idea that their teachers are working together. This activity will vary depending on how much information about the learning team was given to students when they registered for their classes.

9. Begin a team calendar of homework assignments and tests. Teams also can use this calendar to plan interdisciplinary units or team events. Students like the coordination of homework and tests by their teachers because, ideally, such a calendar evens out the study load. Teachers benefit because the calendar helps them to coordinate lessons on shared topics.

10. Decide where, how long, and how often to meet as a team. It is important to find a quiet place where the team can meet without being interrupted by other colleagues. Teams also need to decide how many times per week they will meet and for how long.

Sustaining the Effort

Long-term success with learning teams hinges on program assessment that is built into the effort. A research and development committee of teachers, students, and parents — including team members and outsiders — can work with counselors and school administrators to create a model for pre- and post-assessment of the learning team. Important tools and areas of the assessment can include:

- Open- and closed-ended surveys of students, teachers, and parents;
- The number of home contacts and the results of contacts;
- The minutes or logs of team meetings;
- A calendar of the curricular connections that were made;
- Standardized test scores; and
- Attendance, grade, and discipline referral data.

One of the reasons that high schools fail to change is that many fail to assess their success over the long term. Consequently, school leaders do not know whether what they are doing is having a positive or negative effect on student outcomes and attitudes. Good assessment can avoid this problem.

Additionally, solid team leadership over the long term is important. Teacher teams need time and guidance to develop into efficient and effective working groups. In particular, teachers working in a learning team for the first time may try to accomplish too much

and so risk burnout and anxiety related to unmet goals. Team leadership and collegial support can prevent this.

Following are 10 steps that an effective learning team coordinator or school administrator can take to help ensure that learning teams are successful and sustainable:

1. Maintain the structural purity of your teams in terms of teachers sharing common students and common planning time.
2. Create a "Learning Team Guide Sheet" for administrators, counselors, secretaries, and other support personnel that details such things as which teachers are on which team, what subjects/periods they teach, and when and where their common planning occurs.
3. Schedule opportunities for learning team teachers to share with each other and with nonteam colleagues what they are doing in their classes.
4. Schedule team leader or representative meetings on a regular basis and plan to visit each team once per quarter or trimester.
5. Reward team teachers with professional development opportunities. For example, send team members to visit teaming programs at other schools or to conferences, cover their association membership fees, or help them purchase professional books.
6. Provide financial, material, and facility support for special team activities.
7. Try to prevent "Us vs. Them" rivalry between teams or between team teachers and nonteam teachers.

8. Empower teams to make decisions that can best be made by the professionals who know the students well.
9. Coordinate the development of a long-range plan for the program.
10. Collect baseline data before teaming begins or set up a control group if possible. Follow through with qualitative and quantitative assessments over time — and publicize successes.

What the teams themselves do should be fully supported with the coordination and leadership from department chairs, administrators, and others in authority.

Concluding Comments

As a high school social studies teacher, I have tried to help my students to understand that we are living in a rapidly changing, increasingly interdependent world. I consider the concept of interdependence to be a "natural law" of modern human existence. Yet this basic idea seems to be ignored in thousands of high schools throughout the country. Rather than being organized communally to support and enhance interdependent relationships, most high schools are unnecessarily bureaucratic.

Aside from the current movement toward block scheduling, the dominant model of structuring high school schedules and curricula has not changed much since the birth of high schools a hundred years ago. In most school settings, people are guided by a "mass production" model of instruction in which our education factories are divided into departments of knowledge and employees rarely collaborate to solve problems. Learning is still dictated by the bell.

This 20th century industrial model of education needs to give way in order for us to successfully manage the Information Revolution and to move into the

21st century. Whether they are called learning teams, teams, houses, families, pods, communities, or clusters, the basic concept of connecting people and the curriculum must be the engine of high school reform for all schools — large, medium, and small; rural, suburban, and urban. If much of learning is about human and cognitive relationships, then interdisciplinary learning teams must come of age and become commonplace in our nation's high schools.

However, it also is important to remember that learning teams are no more than a potentially powerful means to an end. Scheduling interdisciplinary learning teams does not guarantee any change or improvement in terms of curriculum, achievement, or relationships. Nonetheless, when a school's structural patterns are reorganized correctly for learning teams, then the necessary foundation is laid for meaningful interdisciplinary and interpersonal connections to take place.

I do not believe that there is one distinct model of reform or of teaming that works everywhere for everyone. But I do believe that we can learn a lot from our colleagues in other schools and use that knowledge to improve our unique school communities. High school interdisciplinary teaming can be a systemic reform effort if those of us who have experimented with teaming share our successes and problems at conferences and in publications. High school educators and change agents need to have the opportunity to network. We have to collaborate within and beyond our buildings so that we can support each other and learn from each others' successes and failures.

In this light, it is encouraging to witness and be a part of a movement to establish regional and national networks and conferences for high school educators to share their experiences. Organizations such as the National High School Association in Irvine, California; the National Association for Core Curriculum in Kent, Ohio; the Association for Supervision and Curriculum Development's two networks for High School Change and Interdisciplinary Curriculum; and the National Association of Secondary School Principal's Alliance of High Schools all have a role to play in providing a national platform for high school reform.

Paul George predicted in *The Middle School — And Beyond* (1992) that hundreds of high schools around the nation will be teaming by the turn of the century, and it seems this prediction is coming true. As I travel to conferences, network over the Internet, and read professional publications, it is exciting to learn about more and more high schools where a group of traditionally isolated teachers are experiencing the magic of teaming.

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The Phi Delta Kappa Educational Foundation was established on 13 October 1966 with the signing, by Dr. George H. Reavis, of the irrevocable trust agreement creating the Phi Delta Kappa Educational Foundation Trust.

George H. Reavis (1883-1970) entered the education profession after graduating from Warrensburg Missouri State Teachers College in 1906 and the University of Missouri in 1911. He went on to earn an M.A. and a Ph.D. at Columbia University. Dr. Reavis served as assistant superintendent of schools in Maryland and dean of the College of Arts and Sciences and the School of Education at the University of Pittsburgh. In 1929 he was appointed director of instruction for the Ohio State Department of Education. But it was as assistant superintendent for curriculum and instruction in the Cincinnati public schools (1939-48) that he rose to national prominence.

Dr. Reavis' dream for the Educational Foundation was to make it possible for seasoned educators to write and publish the wisdom they had acquired over a lifetime of professional activity. He wanted educators and the general public to "better understand (1) the nature of the educative process and (2) the relation of education to human welfare."

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